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13

OBSERVATIONS
ON THE REPORT

OF

The Committee of Weights

AND

Measures ;

&c. &c. &c.

BY CALCULATOR.

ORIGINAL.

1814.

OBSERVATIONS, &c.

HAVING seen, through the medium of the newspapers, the substance of the report of the committee appointed to inquire into the original standards of weights and measures, &c. and in the Pamphleteer of August last, two letters on the same subject, addressed to the Earl of Liverpool, by F. Perceval Eliot, Esq.—also, “A Sketch for a new division and sub-division of *Monies, Weights, and Coins*, by *Mercator*,”—and as the committee in the report, as well as *Mercator*, refers to the French new system, in which these are all combined and connected, I shall venture to make a few observations on these very interesting subjects, and to recommend that, whenever any alteration is made, it may extend to the *Assay* of Bullion, the *Standard* of Coin, and the *decimal* division of money of account.

The report notices a remarkable coincidence, that one cubic foot of water weighs exactly 1000 ounces avoirdupoise,

and the committee gives a due preference to an unerring standard in nature, (which is also the basis of the French newsystem) to the antiquated and fallacious mode by grains of wheat; the Committee then goes on to recommend some trifling alteration in liquid and dry measures, so that they shall contain integer numbers of ounces, the whole of which appears so well arranged, that it is more than probable the legislature will adopt the report, on account of its greater accuracy, and as a remedy to the irregularities which have been so long complained of, the inconvenience of which, confirmed by the report, has long been felt, and has often been attempted to be remedied by various committees appointed by Parliament, but never yet accomplished, owing, as it evidently appears, to the incompetence of the individuals composing these committees, all of which have successively left the matter unfinished.

The committee then further recommends that troy weight may be retained for the traffic in gold and silver, on account of its connexion with the standard of the coin, but the author of the *Sketch* has so ably, though concisely, developed the subject, and, comparing our, with the French new, system, shown the great inconvenience of the former, as to induce me to try it by the test of the latter, and my investigation has led me to suggest some alterations, but previous to my stating them, and in order to obviate the necessity of reference to the *Sketch*, and also for the purpose of bringing the whole subject within view of those who may not have read it, it may not be improper to point out that it is proposed, for the *Assay*, that gold and silver shall be represented

Fine by 1000.

Standard by 900.

Money of Account 1000. = £1.

<i>Coins.</i>			
Gold.	{ 1 Pound	1000	Mils.
	{ Half	500	—
Silver.	{ Crown	250	—
	{ Half	125	—
	{ (Shilling)	50	—
	{ (Sixpence) ...	25	—
Copper.	{ (Penny)	5	—
	{ (Farthing) ...	1	—

these new denominations may be adopted.

It will be sufficient to state thus far from the Sketch, and, under the supposition that avoirdupoise weight will be preserved, as recommended by the committee, and for the better combination of weights, I would now propose that, for the traffic in gold and silver, a pound weight be adopted, equal to 6300 grains Troy, and that the prices should be regulated upon *fine*, so that adding one ninth alloy to the pound *fine* would produce 7000 grains, or one pound Avoirdupoise, whereby the value of the latter, namely one pound avoirdupoise, *standard*, would be the same as one pound *fine* bullion weight.

The Pound bullion weight, to be divided thus :

<i>Decimal grains. Troy grains.</i>			
lb. —————	10000 ———	equal to	6300
oz. —————	1000 ———		630
dec. of an oz. —	100 ———		63
hund. of an oz.	10 ———		6,3
grain —————	1 ———		,63
dec. of a grain —	0,1 ———		,063
hund. of a grain	0,01 ———		,0063

The following Table to be adopted for the *Mint-price* of Gold and silver, per lb. of 10000 Decimal grains, equal to 6300 Troy grains.

Contents fine.	Gold.	Silv.	Contents fine.	Gold.	Silv.	Contents fine.	Gold.	Silv.
1	0,060	0,004						
2	0,120	0,008	20	1,200	0,080	200	12,000	0,800
3	0,180	0,012	30	1,800	0,120	300	18,000	1,200
4	0,240	0,016	40	2,400	0,160	400	24,000	1,600
5	0,300	0,020	50	3,000	0,200	500	30,000	2,000
6	0,360	0,024	60	3,600	0,240	600	36,000	2,400
7	0,420	0,028	70	4,200	0,280	700	42,000	2,800
8	0,480	0,032	80	4,800	0,320	800	48,000	3,200
9	0,540	0,036	90	5,400	0,360	900	54,000	3,600
10	0,600	0,040	100	6,000	0,400	1000	60,000	4,000

whereby the proportion between gold and silver would be as 1 to 15.

One lb. *fine* brought to *standard* by the addition of one ninth alloy (making one lb. avoirdupoise) to be coined into

Gold	{ Pounds ... 60	Hence it follows that one pd. Sterling or money of account would contain,
	{ Half-pound 120	
	{ Crowns ... 16	
Silver	{ Half-crowns 32	
	{ 50 Mills ... 80	Dec. grai. Troy grains. Stand. Fine. Stand. Fine.
	{ 25 Mills ... 160	

in gold coin—166,67—150 = 116,67—105

in silver coin—2500,— 2250 = 1750 —1575

And, as is stated by *Mercator*, the French

Kilogramme being equal to ... 15436 Troy grains.

it would also be equal to ... 24501 $\frac{27}{63}$ dec. gr.

and as the standard of French Coin is the same as that proposed, and that their established proportion between Gold and Silver, is 1 to 15 $\frac{1}{2}$, One kilogramme of *standard* Gold being coined into

155-20 francs Pieces Frs. 3,100

And 1 Kilogramme of *standard* Silver, into

40—5 francs	}	 200
200—1 ———		

this would establish the Par of Exchange with France.

in Gold—23,43 } 23 Francs, 05 centimes per

in Silver—22,67 } Pound Sterling.

I must now observe that my reasons for preferring the

proportion of 1 to 15 between gold and silver are, because I consider it is of importance that we should at all times have a plentiful supply of the latter, for various purposes—in the first place to insure a sufficiency of the legal silver coin of the realm, in the next to answer the great and constant demands for our various branches of foreign commerce, also for the manufacture of articles of ornament and luxury, which is become so great a branch of trade both for home use as well as for exportation, and in which so large a proportion of the silver brought to market is absorbed, and finally because it is evident that the price and standard of our silver coinage is no longer adapted to the great changes which have taken place; and inasmuch as the great silver coinage during the reign of William the Third (which is said to have cost three millions sterling to the nation) has totally disappeared, together with all the subsequent issues from the mint—to remedy which and to prevent a recurrence of the same evil it has been suggested that Government should, in a new silver coinage, take a seignorage of ten per Cent, but I think I am not deceiving myself by supposing that my proposal is not only the safest but the best remedy, and that it will fully answer the desired purpose, as it must be obvious that from too great a disparity between our relative proportions of gold and silver and those of neighbouring states, in fact of all other countries, other and no less or perhaps greater inconveniences would arise—

I shall now observe that the remarks of the author of the *Sketch* on our commercial cwt. are equally judicious and well-timed, but as I conclude it is not likely, nor indeed does it appear desirable, that any alteration will be made in the commercial weight of the country, on account of its connexion with our measures of capacity, as appears by the

report of the committee, his proposal of a quintal of 100 lbs. of 16 oz. troy cannot, I conceive, be adopted—but this does not prevent our availing ourselves of his very useful suggestion by adopting a cwt. of 100 lbs. instead of 112 lbs. avoirdupoise, whereby the object he has in view would be attained, namely greater facility in all calculations; but, as a ton of 2000lbs. avoirdupoise would be too small, the ton might consist of $22\frac{1}{2}$ cwt. or 2250lbs. which would be far preferable to our present ton of 2240lbs.

I must not omit acknowledging myself indebted for much information to the authors above mentioned, and that I have also had recourse to “*La Théorie du nouveau Système des Poids et des mesures appliquée aux opérations monétaires et de l’orfèvrerie, &c. par Mons. Le Page d’Arbigny, Ancien premier Commis et Caissier de la direction de la monnaie à Paris*”—containing the mint tables of Assay, and price of bullion—nor can I even claim the merit of having applied the system to our money, weights, and coins, which was previously done by the author of the Sketch—I have only endeavoured to explain, and to adapt it more accurately to our own monies, weights, and coins.

It occurred to me upon the first reading of the Sketch, in which I have been since confirmed, by the removal of the restriction to the exportation of the coin of the realm from France; which we are also taught by recent experience, that all measures are insufficient to prevent it, while so strong a temptation exists, as that which was produced by the trade under licences, at one period of which, (the error was at last perceived, but too late for effectual remedy,) we were importing every article, without scarcely any exception, to an unlimited extent; and this, at the very period, when all exportation to the Continent had ceased. I trust we may flatter ourselves that such a state of things can never again occur;

on the one hand, it is not within the scope of probability, that the whole continent of Europe can again be subjugated, and brought under the dominion of one man—the tyrant and oppressor of every conquered country and, at the same time, our inveterate and irreconcilable enemy; and as, on the other hand, should such a case, or one in the least degree similar, again occur, we shall, I trust, from the benefit of experience, be upon our guard, and immediately ready to act, as the exigencies of the case may require; but until such a period arrives, I see no cause for any apprehension, such as to induce Government to continue the restriction to the free circulation of the precious metals, whether coin of the Realm, or Bullion—let the mint be at all times open to receive Bullion, at the mint price, less the expense of coinage, and while Trade, *Export* as well as *Import*, has its free course, we need never, I conceive, entertain any alarm of not having a sufficiency of circulating medium in the legal coin of the Realm. We may then safely dispense with all the Statutes against its exportation, or they may remain a dead letter.

Before I dismiss the subject I must observe that the above Table is upon the model of the French, omitting the column of the nett prices paid by the Mint at Paris, after deducting the expense of coinage, which, upon *fine* Gold, is ten Francs per Kilogramme, or $\frac{1}{100}$ of a Franc upon every thousandth part fine, answering to $\frac{29}{100}$ per cent. on the value, and, upon *fine* Silver, Francs 3,333 per Kilogramme, and less in proportion upon every degree worse or less fine, answering to $1\frac{1}{2}$ per cent. upon the value.

This additional column I have deemed unnecessary, as the expense of coinage once ascertained and established at a per centage on Gold and Silver, it is easily deducted from the full mint value of the Bullion.

The simplicity of such a Table has unquestionably many advantages, and supersedes all the toil and labor attending our present mode of reducing to Standard, so extremely perplexing, difficult, and liable to error in calculation—and any fluctuation in the *market price* of Bullion, above or below the full mint value in the Table, (the price of the Coin) would be determined by a per centage, premium, or discount, which would apply equally to every degree of fineness.

There cannot be a doubt but that this Table, founded upon the new system proposed, would give the utmost facility and dispatch to business, both at the Mint, and at the Bullion Office at the Bank, where, according to the present mode, it is attended with so much trouble and waste of time to all parties, and the calculation is moreover so intricate, that I believe I may venture to assert, very few, Merchants or others, understand it.

The table will give a practical explanation of my proposition, which is indeed that of *Mercator*, from whom I however differ only by adopting a weight to obtain integers for the prices of gold and silver.

It will be observed that, by regulating the price upon *fine*, every thousandth part *fine* in a lb. weight, corresponding with a thousandth part of its weight, is worth

in Gold	0,062	} thousandth parts of the Pound
in Silver	0,004	
		or Mils—money of Account.

It is quite unnecessary to point out the great utility, perfect simplicity and convenience of a system in which the division of Weight, Assay, and Money all correspond with each other.

London, Sept. 26, 1814.